UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,879	01/18/2001	Brian Keith Schmidt	0007056-0058/P5318/BBC	9293

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EXAMINER
NGUYEN, QUANG N

ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/765,879	SCHMIDT, BRIAN KEITH
	Examiner	**Art Unit**	
	Quang N Nguyen	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 November 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7-10,14-17 and 21-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-10,14-17 and 21-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>23 April 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20050621</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

Detailed Action

1.   This Office Action is in response to the Amendment filed on 11/01/2005. Claims 1, 8 and 15 have been amended. Claims 1-3, 7-10, 14-17 and 21-26 are presented for examination.

Specification

2.   The disclosure is objected to because of the following informalities:

The attempt to incorporate subject matter into this application by reference to the co-pending US patent application entitled "Method and Apparatus for Representing and Encapsulating Active Computing Environments" Application No. __/___,___ is ineffective because the reference document is not clearly identified as required by 37 CFR 1.57(b)(2), i.e., it is missing the Application Number.

Appropriate correction is required.

¶ 6.19.03 Correction of Ineffective Incorporation by Reference

The incorporation by reference will not be effective until correction is made to comply with 37 CFR 1.57(b), (c), or (d). If the incorporated material is relied upon to meet any outstanding objection, rejection, or other requirement imposed by the Office, the correction must be made within any time period set by the Office for responding to the objection, rejection, or other requirement for the incorporation to be effective.

Compliance will not be held in abeyance with respect to responding to the objection, rejection, or other requirement for the incorporation to be effective. In no case may the correction be made later than the close of prosecution as defined in 37 CFR 1.114(b), or abandonment of the application, whichever occurs earlier.

Any correction inserting material by amendment that was previously incorporated by reference must be accompanied by a statement that the material being inserted is the material incorporated by reference and the amendment contains no new matter. 37 CFR 1.57(f).

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4.   **Claims 1, 8 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

5.   The newly amended limitations "... in a manner transparent to an application

level" and ", wherein the translating is transparent to both an operating system level and

the application level" as claimed in claims 1, 8 and 15 are not described/supported in

the written specification *(Examiner respectfully requests Applicant to exactly point out

which portions of the written specification describe the newly added limitations as

claimed)*.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   **Claims 1, 3, 7, 8, 10, 14, 15, 17 and 21-26 are rejected under 35 U.S.C. 103(a)**

as being unpatentable over Hipp (US 6,848,106), in view of VMware (Technical

White Paper – February 1999).

8.   As to claims 1 and 26, Hipp teaches a method for providing a virtual namespace

for a compute capsule, comprising:

assigning a virtual token to a resource *(assigning a virtual RID to a system resource)* within said compute capsule, said resource being of an underlying machine and capable of being named by said compute capsule *(if a resource is marked for copy-on-write, then a reference to the original underlying object is kept)* (Hipp, C9:L34 – C10:L48);

interposing a name translator *(the virtual resource translation table 502)* between said resource and said compute capsule (Hipp, C10: L43-47 and C11: L8-14);

binding said resource to said virtual token *(the virtual resource translation table 502 contains the mapping of the resource semaphore and the virtual RID)* (Hipp, C11: L15-29); and

translating said virtual token into said resource using said name translator *(translating the virtual RID into system resource using the virtual RID translation unit)*, if the compute capsule names said resource (Hipp, C11: L30-42).

However, Hipp does not explicitly teach said compute capsule being configured to provide an encapsulated form that is capable of being moved between computers associated with different physical devices without restriction and being independent of an environment of a host system, e.g., independent of configuration settings of a host system.

In a related art, VMware teaches VMware Virtual Platform, a thin software layer that allows virtual machines with multiple operating system environments to work in concert with each other sharing files and devices, wherein VMware Virtual Platform can encapsulate a virtual machine and enable it to be moved freely among different physical

machines *(i.e., being independent of environment/configuration settings of a host system)* (VMware, page 2, paragraphs 3-4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Hipp and VMware to configure the compute capsule to provide an encapsulated form that is independent of an environment of a host system since such methods were conventionally employed in the art to allow the system to support the integration of multiple environments so that these environments to perform like multiple applications on a single computer.

9.   As to claim 3, Hipp-VMware teaches the method of claim 1 wherein said virtual token is only identifiable from within said compute capsule *(only the virtual RID is visible to the application)* (Hipp, C9:L66 – C10:L16).

10.   As to claim 7, Hipp-VMware teaches the method of claim 1 further comprising: controlling access to said active computing environment *(for every resource included in the snapshot virtual template, rules for the resource and access type are looked up, i.e., controlling access via an access list or rules list)* (Hipp, C9: L24-29).

11.   Claims 8, 10, 14, 15, 17 and 21 are corresponding virtual namespace and computer program product claims of method claims 1, 3 and 10; therefore, they are rejected under the same rationale.

12.   As to claims 22-23, Hipp-VMware teaches the method of claim 1, wherein said compute capsule encapsulates an active computing environment including one or more processes and state information *(an application snapshot may consist of multiple processes and multiple threads and include shares resources in use by a process)* that allows said compute capsule to be suspended and revived on a binary compatible machine *(snapshot virtual templates are node-independent)* (Hipp, C3: L45-58).

13.   As to claim 24, Hipp-VMware teaches the method of claim 1, wherein said resource is defined by one or more of a file, a processor, a memory, and an attached device *(data is loosely defined to mean any system resource such as memory, files, sockets, handles, etc.)* (Hipp, C6: L58-65 and VMware, pages 6-7, section Resource Management).

14.   As to claim 25, Hipp-VMware teaches the method of claim 1, wherein said compute capsule is configured to communicate with processes outside said compute capsule through Internet sockets and globally shared files *(VMware Virtual Platform emulates an Ethernet card to allow virtual machines to share files, printers and machines connected to the LAN or the Internet)* (VMware, page 6, paragraph 6).

15.   Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp-VMware, in view of Howes et al. (US 6,324,177), herein after referred as Howes.

16.   As to claim 2, Hipp-VMware teaches the method of claim 1, but does not explicitly teach said virtual resource translation table 502 is a hash table.

In a related art, Howes teaches a process of creating a Bind ID object, wherein a client IP address *(e.g., an object ID such as an application ID, thread ID, process ID, connection ID, etc.)* is stored in the assigned Bind ID object *(i.e., the assigned virtual token)* then the Bind ID object is added to the Bind ID object hash table that is used to search through the Bind ID objects to specify an instance of a virtual machine to handle client connections *(to translate/map the virtual token into the corresponding resources)* (Howes, C9: L40-63).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Hipp-VMware and Howes to include a hash table for translating/mapping virtual tokens/IDs into resources since such methods were conventionally employed in the art to allow the system to facilitate searching in order to translate/map the virtual tokens (Bind IDs) into corresponding resources with great efficiency and speed.

17.   Claims 9 and 16 are corresponding virtual namespace and computer program product claims of method claim 2; therefore, they are rejected under the same rationale.

Response to Arguments

18.   In the remarks, Applicant argued in substance that

(A)   Applicant has amended independent claims 1, 8 and 15 to further clarify that "the resource is shared between compute capsules" (Remarks, page 7).

As to point (A), after reviewing independent claims 1, 8 and 15, Examiner recognized that no new amended limitation citing "the resource is shared between compute capsules" as claimed in claims 1, 8 and 15. However, in claim 8, there is a new amended limitation on line 4 claiming that "said resource not being shared with other compute capsules" which is contrary to Applicant's argument. Appropriate correction/explanation/support is required.

(B)   As amended, independent claims 1, 8 and 15 further specify that "the translation is transparent to both an operating system level and an application level and the binding is transparent to the application level" (Remarks, page7).

As to point (B), Examiner submits that the newly amended limitations "the translation is transparent to both an operating system level and an application level and the binding is transparent to the application level" as claimed in claims 1, 8 and 15 are not described/supported in the written specification *(Examiner respectfully requests Applicant to exactly point out which portions of the written specification describe the newly added limitations as claimed).*

(C)   As amended, claims 1, 8 and 15 further define "without restriction as the computers having different physical devices" (Remarks, page 8).

As to point **(C)**, **VMware (Technical White Paper – February 1999)** teaches VMware Virtual Platform, a thin software layer that allows virtual machines with multiple operating system environments to work in concert with each other sharing files and devices, <u>wherein VMware Virtual Platform can encapsulate a virtual machine and enable it to be moved freely among different physical machines</u> **(VMware, page 2, paragraphs 3-4)**.

19.   Applicant's arguments as well as request for reconsideration filed on 11/01/2005 have been fully considered but they are not deemed to be persuasive.

20.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Quang N. Nguyen whose telephone number is (571)

272-3886.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

SPE, Rupal Dharia, can be reached at (571) 272-3880. The fax phone number for the

organization is (703) 872-9306.

Information regarding the status of an application may be obtained from the

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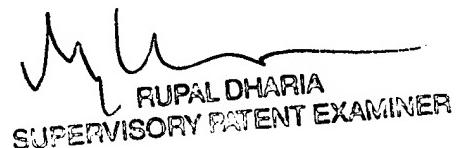
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